

Chapter 12

Agricultural Social Issues

California leads the nation in farm production and is a major contributor to the U.S. export trade, exporting more than \$12 billion in agricultural products each year. According to the California Department of Food and Agriculture (CDFA 2001), every \$1 billion in exports creates approximately 27,000 jobs. In 2000, the value of agriculture production in California exceeded \$27 billion (CDFA 2001), and in 1999 the agriculture sector employed approximately 400,000 laborers (Regional Economic Information System[REIS] 1999). In addition to the labor supplied by direct farm employment, many supporting agribusinesses provide employment opportunities. These agribusinesses supply pre- and post-processing operations necessary for crop production, such as transport, storage, retail sales, and marketing. Idling of cropland reduces the employment needs of these businesses. (See Chapter 11 for discussion.)

The ability of a community to withstand the social effects of unemployment is a function of its social well-being. Social well-being involves both community stability issues and environmental justice issues. Although these two categories overlap in many ways, this document describes them separately. This chapter focuses on the effects of crop idling on farm labor and subsequent outcome on community stability. Indicators of community stability include income, poverty, unemployment, and job opportunities. Environmental Justice, Chapter 19, identifies whether Program operations would affect ethnic or low-income groups.

Environmental Water Account (EWA) acquisitions via crop idling could affect community stability. In an idling acquisition, a farmer/landowner would refrain from planting crops for a season and transfer to the EWA agencies the irrigation water normally required for consumptive use. This would reduce the demand for farm laborers. EWA Management Agencies would target rice and cotton for water acquisitions, which require few laborers and large amounts of water relative to other crops. (Refer to Section 19.1.)

12.1 Affected Environment/Existing Conditions

The Affected Environment/Existing Conditions section describes the area of analysis, as pertinent to agricultural social issues. The section then presents regional and county data on community stability measures, followed by specific characteristics of farm laborers. This analysis uses 1999 data to describe existing conditions because it was generally the most current data available.

12.1.1 Area of Analysis

The Agricultural Social Issues analysis divides the State into two regions: the Upstream from the Delta Region and the Export Service Area. The Upstream from the Delta Region comprises counties where potential rice idling may occur, including Butte, Colusa, Glenn, Placer, Yolo, and Sutter. The Export Service Area comprises



Figure 12-1
Agricultural Social Area of Analysis

counties where potential cotton idling may occur, including Fresno, Kern, Kings, and Tulare. The boundaries of each county in each region define the Upstream from the Delta Region and the Export Service Area. (Refer to Figure 12-1.) Counties selected for potential idling contain extensive rice or cotton acreage and irrigation districts that are willing to participate in the EWA Program. (Refer to Chapter 2 for further discussion.)

12.1.2 Community Stability

The ability of a county or community to absorb job losses is a function of its economic diversity and social well-being. Social well-being involves both community stability and environmental justice issues. Chapter 19 discusses Environmental Justice issues. The following discusses economic indicators of community stability.

Economic indicators of community stability include:

- Population
- Median income
- Per capita income
- Poverty rate
- Unemployment rate

Median family income¹ measures the annual income received by an average family living within a household. The larger the median family income of the county, the more income tax revenue is generated, which can be used to provide community

¹ The median level is the point for which one-half of the income observations are above and one-half of the income observations are below.

services for the unemployed. For example, the relatively high median incomes in Placer County provide taxes that help stabilize the community against unemployment effects. In 2000, Placer County's agricultural industry (generally a low-income industry) employed less than 3.5 percent of the civilian workforce, and trade and service industries (higher income industries) employed over 50 percent of the workforce (DOF 2000). Unemployment rate was a relatively low 3.2 percent (DOF 2000).

Per capita income is the total of all wages, interest, rents, and other incomes divided by the number of people in the county. In Yolo County, people earn high per capita incomes, relative to other counties in the Region. Again, taxes on higher incomes provide relatively more compensatory social services to offset unemployment effects and contribute to social stability.

The percentage of people living below poverty level is also a measure of community stability. Counties experiencing high poverty rates earn less revenue per capita than those with lower poverty rates. These counties must provide more services for the economically disadvantaged and have fewer resources.

The last economic indicator that influences community stability is unemployment rate. A high unemployment rate increases the demand for more social services, which the county is expected to supply. In Colusa County, the 1999 unemployment rate was relatively high (15.9 percent). Colusa's unemployment rate, coupled with its low per capita income, represents a less stable community structure that is less effective in buffering employment loss than other counties with lower employment rates (California Economic Development Department [EDD] 1999).

California has an infrastructure in place that buffers the needs of the unemployed. As shown in Tables 12-2 and 12-3, the average number of unemployed varies between each county. Programs offering services include, but are not limited to, *Experience Works* that provides training for mature workers, as well as public programs that include MediCal, CalWORKS, food stamps, regional occupational training programs, and others. These programs would likely offer services to individuals displaced by crop idling. Interviews with individuals involved with farm labor indicate that the services offered do not include affordable medical insurance coverage, and generally displaced farmworkers find it difficult to meet the most basic financial obligations of rent and utilities. Therefore, displaced farmworkers would most likely require financial supplements to cover fixed expenses and medical insurance (Quiroga-Valvodinos 2003; Clayton 2003).

Factors affecting social well-being of the unemployed also include steady employment and job guarantees. Job guarantees are influenced by seasonal and economic changes. Natural conditions can lengthen or shorten employment (e.g., water shortages can reduce the number of acres farmed). The effect of natural occurrences on farm labor in the past is a component of the assessment. (See Section 12.3.1 Assessment Methods.)

In general, stable communities are typically areas that collect sizable tax revenues and have large urban centers with broad-based economies more capable of providing an assortment of public services, including unemployment compensation. The large and diverse industries of urban centers provide job opportunities, income, and tax revenues that serve to stabilize the communities. These more stable communities are identified by sizeable median incomes, low unemployment, and the number of re-employment opportunities. Conversely, a less stable community would be a smaller county, city, or local government with smaller economic base, higher unemployment, fewer re-employment opportunities, limited social services, and fewer revenues. Unemployment has a larger effect on these communities.

12.1.3 Regional Community Stability

Community stability statistics help identify areas more sensitive to crop idling. Table 12-1 details regional economic indicators pertaining to community stability in the counties where crop idling may occur. The population in the Upstream from the Delta Region areas earns higher median and per capita incomes than those in the Export Service Area, which have greater poverty² and unemployment³ rates than Upstream of the Delta Region.

Table 12-1 Existing Conditions: Regional Demographics and Economic Indicators of Social Well-Being		
	Upstream of the Delta Region	Export Service Area
1999 Population ⁽¹⁾	713,873	1,887,275
Average Median Family Income ⁽²⁾	\$39,295	\$34,975
Average Per Capita Income ⁽¹⁾	\$24,891	\$19,023
Average Poverty Rate ⁽³⁾	15.6%	21.8%
1999 Average Unemployment Rate ⁽⁴⁾	9.1. %	13.6%
Unemployment Range ⁽²⁾	3.2% - 15.9%	11.4% - 16.5%

Counties in the Upstream from the Delta Region include Glenn, Colusa, Yolo, Butte, Sutter, and Placer; counties in the Export Service Area include Fresno, Kings, Kern, and Tulare.

⁽¹⁾ REIS, 1999

⁽²⁾ U.S. Census Bureau, 1999

⁽³⁾ U.S. Census State and County QuickFacts, 1999

⁽⁴⁾ 4 EDD, 1999

² Poverty rates are expressed as a percentage of households in the county living at the poverty level or below. The U.S. Census Bureau defines poverty thresholds (levels of income) for families of various sizes and compositions. U.S. Census Bureau information for a family of five is consistent with data indicating that the majority of farmworkers' families are comprised of five individuals. In 1999, an annual income of \$19,882 represented the U.S. Census Bureau poverty threshold for a family of five including three related children under 18 years of age; in California the poverty level for a family of five is a little higher, ranging between \$22,940 and \$24,160 (California Economic Development Department [EDD], 1999).

³ The U.S. Census Bureau defines the unemployment rate as the percent of the civilian labor force (all civilians 16 years of age and over) that is unemployed.

12.1.4 Environmental Measures Incorporated into the Project Description

In order to avoid or decrease adverse social effects on community stability, the EWA would incorporate the following measures as part of the program definition.

- 1) EWA agencies would not purchase water via crop idling if more than 20 percent of recent harvested rice or cotton acreage in the county would be idled through EWA water acquisitions. (Refer to Section 11.2.8 for discussion of additional water acquisition programs.) The EWA would idle less than 20 percent if other reasonably foreseeable transfers under other programs are idling land).
- 2) EWA agencies would also acquire less water by crop idling when the level of land idling is already larger than historically normal.

Social effects of land idling are exacerbated when an unusual amount of land is already being idled. Therefore, idling less land in a local area when the amount of land idling is already more than historically normal would lessen economic effects.

12.1.5 Upstream from the Delta Region

Rice crop idling in the Upstream from the Delta Region would generally occur during dry years, when the Delta has the capacity to transfer the water. Rice is a major commodity in the upstream from the Delta counties of Glenn, Butte, Placer, Colusa, and Yolo. In 2000, milled rice in Butte County contributed 18 percent to California's rice income (CAC 2000). Of the region's 713,873 people, approximately 23,900 (3.3 percent) are farm laborers (REIS 1999). Table 12-2 contains additional information about these counties. The number of farms in each county is given as a general indicator of potentially available farm labor opportunities.

Table 12-2 Upstream Counties- Population, Income, Employment, and Farms								
County	Population⁽¹⁾	Median Income⁽²⁾	Per Capita Income⁽¹⁾	Poverty Rate⁽²⁾	Unemployment Rate⁽³⁾	Average Number Unemployed (1990-2001)⁽⁵⁾	Average Number of Farms between 1987-1997⁽⁴⁾	Average Farm Acreage in County⁽⁴⁾
Butte	195,220	\$31,924	\$22,012	20.9%	6.8%	7,536	1,772	450,347
Colusa	18,844	\$35,062	\$23,085	18.1%	15.9%	1,589	803	445,820
Glenn	26,328	\$32,107	\$18,015	19.9%	11.2%	1,589	1,182	482,411
Placer	34,972	\$57,535	\$34,972	7.7%	3.2%	5,482	1,118	148,514
Sutter	78,423	\$38,375	\$24,223	17.2%	13.0%	5,477	1,371	340,826
Yolo	155,573	\$40,769	\$27,037	15.8%	4.3%	5,314	949	520,366

⁽¹⁾REIS 1999

⁽²⁾U.S. Census Bureau, State and County QuickFacts 1999

⁽³⁾EDD Counties Report 400C Annual Averages 1999

⁽⁴⁾U.S. Department of Agriculture 1997

⁽⁵⁾EDD Labor Market Information, 1990-2001

12.1.6 Export Service Area

Cotton crop idling generally would occur more in the Export Service Area during wet years, due to decreased Delta transfer capacity. Cotton crop idling in the Export Service Area would occur in Fresno, Kings, Tulare, and Kern Counties. Fresno County contains some of the most productive agricultural land in the country and earns some of the highest dollar values in agriculture in the State of California. Of the region's 1,887,275 people, 12,320 (0.7percent) were farm laborers (REIS 1999). Table 12-3 contains additional information on these counties.

Table 12-3 Export Service Area Counties- Population, Income, Employment and Farms								
County	Population⁽¹⁾	Median Income⁽²⁾	Per Capita Income⁽¹⁾	Poverty Rate⁽²⁾	Unemployment Rate⁽³⁾	Average Number of Farms between 1987-1997⁽⁴⁾	Average Number of Farms between 1987-1997⁽⁴⁾	Average Farm Acreage in County⁽⁴⁾
Fresno	763,069	\$34,725	\$21,146	25.6%	13.4%	50,792	7068	1,877,151
Kern	642,495	\$35,446	\$19,886	21.0%	11.4%	35,215	2082	2,909,354
Kings	123,365	\$35,749	\$15,732	23.6%	13.1%	8,178	1125	711,656
Tulare	358,470	\$33,983	\$19,329	27.9%	16.5%	34,723	5609	1,357,986

(1) REIS 1999

(2) U.S. Census Bureau, State and County QuickFacts 1999

(3) EDD Counties Report 400C Annual Averages 1999

(4) U.S. Department of Agriculture 1997

(5) EDD Labor Market Information, 1990-2001

12.1.7 Characteristics of Farm Laborers

The above information presents community stability measures of all sectors of the regional and county economies. Farmworker median incomes and per capita incomes typically represent a fraction of the values identified in Tables 12-1, 12-2 and 12-3. The following is a list of characteristics particular to farm laborers (Rosenberg, et al, 1998) that provide a better understanding of the potential agricultural social effects of crop idling.

- Nearly all farm laborers are foreign born and 93 percent are of Hispanic descent.
- Forty percent of farm laborers do not have legal authorization to work in the U.S.
- The average age of a farm laborer is 33.
- Sixty percent are married, and more than half have children. Farm laborers who are parents have an average of three children.
- Eighty-two percent of farm laborers are male and have a median education level equivalent to the sixth grade.
- Median annual total family income for California crop workers is between \$7,500 and \$10,000

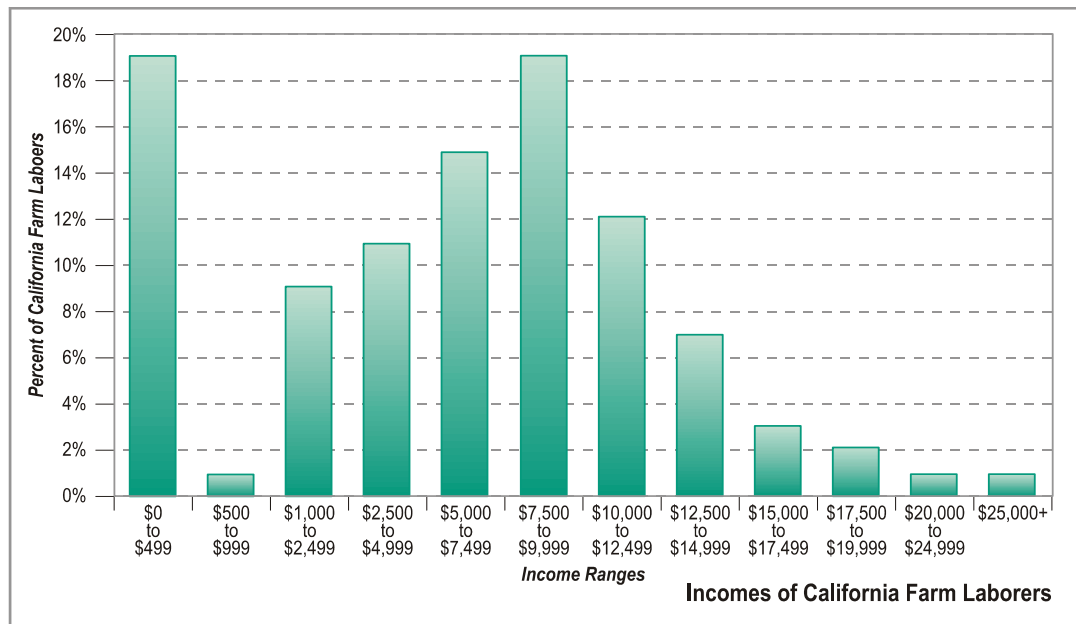
Anecdotal evidence gathered from the California Rice Commission and cotton farms (Schmidt 2002; McCorkle 2002; Davenport 2002) indicate that laborers possess mechanical skills and normally return every season. The laborers are stable employees who are generally not migrant in nature. Cotton farm laborers' annual income fluctuates about the poverty level, but may increase based upon employees'

skill level and desire to work. The cotton season runs between late March and November. The rice season begins in May and runs through November, unless workers remain employed until February to assist in exporting the rice crop.

12.1.7.1 Environmental Justice

The above information indicates that farm laborers are mainly low income and minority. Environmental Justice (Chapter 19) focuses on effects to the low income and minority population. A recent National Agricultural Workers Survey (Rosenberg 1998) provides a thumbnail sketch of California's agricultural workers and verifies that California is heavily dependent upon foreign workers, especially those from Mexico. According to the survey, 91 percent of California's crop workers were born in Mexico, compared to 82 percent in 1990-91.

Surveyors use incrementally increasing income ranges to analyze farmworker wages, as shown on Figure 12-2. Survey results show that the median total family income for



(Rosenberg 1998)

Figure 12-2
Annual Incomes of California Farm Laborers

California farm laborers ranged from \$7,500 to \$10,000. Unauthorized workers earn a median income that ranges from \$2,500 to \$5,000. According to family size and income, 61 percent of California's farmworking families live in poverty – a percentage that is increasing (Rosenberg 1998). Because of the farmworker profile, crop idling could have disproportionate effects on low income and minority farmworkers. Rather than focusing on these issues, this agricultural social effects analysis focuses on the farm laborer population and employment opportunities. Chapter 19 contains a full explanation of EWA effects on low income and minority groups.

12.2 Environmental Consequences/Environmental Impacts

12.2.1 Assessment Methods

A number of factors affect the EWA agencies' ability to transfer water, i.e., price, water availability, and location affect contract negotiations with willing sellers. These limiting factors change from year to year; therefore, EWA Project Agencies may choose to vary their acquisition strategy annually. With the intent of providing the EWA Project Agencies the greatest flexibility, the following text describes the potential effects on farm laborers with maximum idling actions in both the Upstream from the Delta Region and Export Service Area.

This assessment compares the projected agricultural social effects of potential EWA actions to the Baseline Condition. The Baseline Condition description for this assessment employs 20 years of farm labor employment data (between 1980 and 1999) to identify farm labor employment trends. These employment patterns would likely continue into the future. The 20-year period of analysis incorporates variations in weather and economic conditions over time. Additionally, this analysis considers the effects of seasonal fluctuations at the general level, acknowledging that conditions that may affect one farm adversely may have minor or no effects on a neighboring crop.

This 20-year data analysis was also chosen to identify historic fluctuations in farm labor as a means of voluntarily assessing potential adverse effects, though neither 40 CFR 1505.2 nor 40 CFR 1508.14 require mitigation of adverse social effects. Although NEPA does require a discussion of social effects if they are related to the natural or physical environment, it does not require a threshold of significance. Similarly, CEQA does not consider project related economic or social changes as adverse effects on the environment that would require mitigation.

For consistency of analysis, 1999 conditions serve as the basis for impact determination throughout the analysis. An ordinary least square regression identifies each counties' farm labor employment trends⁴; and standard deviations⁵ of the trend reflect annual, seasonal, and economic fluctuations. In counties that exhibit no increasing or decreasing farm labor employment trends, standard deviations of the historic average represent annual seasonal and economic fluctuations. Standard deviations derived for both trends and averages define the baseline against which to measure EWA -generated farm employment changes. This analysis uses average number of workers per 1,000 acres of idled crops to estimate the changes in

⁴ 90 percent significance.

⁵ Standard deviations define the dispersion of data around the mean. Assuming data are normally distributed, 68 percent of the data will fall within one standard deviation of the mean.

employment that could be caused by EWA crop idling⁶. The comparison of EWA changes with the standard deviation of averages or standard deviation of the trends in the Baseline Condition determines whether crop idling produces unemployment beyond natural, seasonal, or economic-related actions.

The estimates of full-time farm worker jobs represent a portion of the total job loss calculated in Chapter 11. The balance of the jobs lost, as described in Chapter 11, would also affect job classifications other than farm workers.

12.2.2 Environmental Consequences/Environmental Impacts of the No Action/No Project Alternative

The No Action/No Project Alternative describes future conditions during Stage 1 of CALFED, if the EWA did not exist. With the exception of Placer County, farmworker employment during this assessment period would either remain the same or increase. Farmers would continue to temporarily idle some land due to land practices and market issues, while other farmers would place previously idled land back into production. The continued rotation of these farming practices would cause some fluctuations in agricultural employment, but those changes would likely reflect that of the employment fluctuations described in the affected environment section.

Additionally, several CALFED and other government sponsored programs would idle land for restoration and habitat purposes. This would permanently take agricultural land out of production. (Refer to Section 12.2.6.)

The analysis of agricultural employment for Placer County indicates that a urbanization would result in a decline to 1240 farm laborers in 2004 from 1720 employed farmworkers in 1983 (REIS). The No Action/No Project alternative would not alter this trend and thus, would have no effect on agricultural social issues for the county. The No Action/No Project Alternative would have no bearing on positive farm labor employment trends in Colusa, Yolo, Butte, Sutter, Fresno, Kern, and Tulare counties. (Refer to Section 12.2.5.)

12.2.3 Environmental Consequences/Environmental Impacts of the Flexible Purchase Alternative

The Flexible Purchase Alternative allows transfers of 600,000 acre-feet and does not specify transfer limits in the Upstream from the Delta Region or in the Export Service Area. The potential for crop idling actions in the Upstream from the Delta Region is greater during dry years when Delta pumping availability allows EWA agencies

⁶ University of California Cooperative Extension Crop Budgets 1999 and 2001. Average number of full-time workers per 1,000 acres includes both machine and nonmachine labor. Because the forty-inch row alcala variety is more commonly planted than the thirty-inch row, the labor equation assumes that 66 percent of the cotton is of the 40-inch row variety, and 33 percent is the 30-inch row alcala variety. A weighted average of the two varieties establishes that 6.6 labor equivalents are required for every 1000 acres of cotton. Full time is assumed to be 2000 hours per year. Every 1000 acres of rice requires 2.7 full-time labor equivalents.

additional capacity for transfers. Crop idling in the Export Service Area would occur most during wet years or when stored/banked groundwater would not be available; however, purchases would be more expensive in the Export Service Area. The Flexible Purchase Alternative would rely more heavily on the Export Service Area during wet years due to limited Delta pump capacity. Transfers in this area could involve up to 540,000 AF and progressively decrease during dry conditions. Crop idling decisions also depend upon precipitation in the northern and southern State; precipitation would affect export pump availability and how the State Water Project (SWP) allocates existing resources.

EWA agencies would like the ability to extend annual crop idling contracts. Contracts for multi-year water transfers would be made with water agencies. Consistent with the project description, multi-year contracts would not result in idling more than 20 percent of available rice or cotton acreage in a county or region. These stipulations would maintain the current economic and social conditions.

Described below are the maximum effects on farm labor employment, if the EWA agencies acquire the maximum amount of water from crop idling. Exceeding historic unemployment levels could affect community stability. The basis for a worst-case scenario analysis is to identify all potential effects. Crop idling affecting fewer laborers than historic fluctuations under this alternative would affect even less with decreased crop idling.

12.2.3.1 Upstream from the Delta

Table 12-4 shows the maximum acreage that could be idled in each county under 1995 through 1999 economic conditions, according to the 20 percent measure incorporated into the project description. (See Section 11.2.3 for further discussion on the 20 percent crop idling measure.) Consistent with 1999 University of California Cooperative Extension Crop Budgets, 2.7 workers are required for every 1,000 acres of rice. The following analysis identifies the number of full-time farm workers that would be displaced by maximum crop idling in each county.

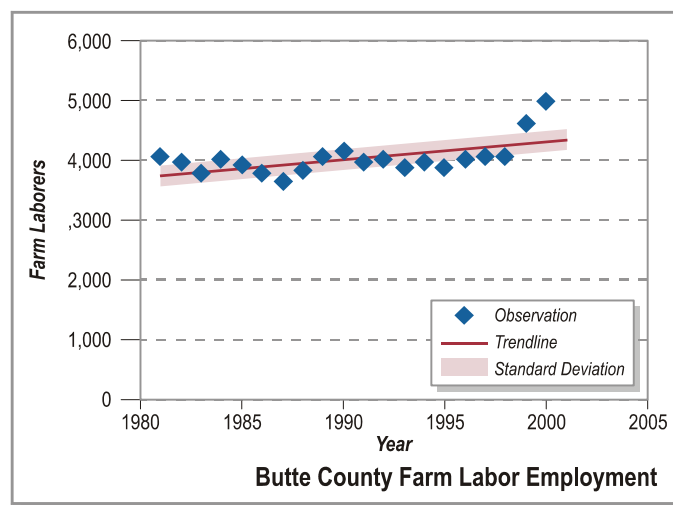
Table 12-4 Maximum Proposed Acreages for Rice Idling for Flexible Purchase Alternative			
	Total Acres of Rice in County⁽¹⁾	Maximum Acreage Proposed for Idling in Dry Years	% of Total
Butte	95,120	19,000	20.0%
Colusa	132,338	26,460	20.0%
Glenn	83,777	16,750	20.0%
Placer	16,379	3,280	20.0%
Sutter	96,722	19,340	20.0%
Yolo	23,822	4,770	20.0%
Total	448,158	89,600	20.0%

⁽¹⁾ The figures representing total rice acres within the counties are based on a five-year average to take into account any recent land trends in rice production. The data is taken from the County Agricultural Commissioners Reports from 1995 to 1999.

12.2.3.1.1 Butte County

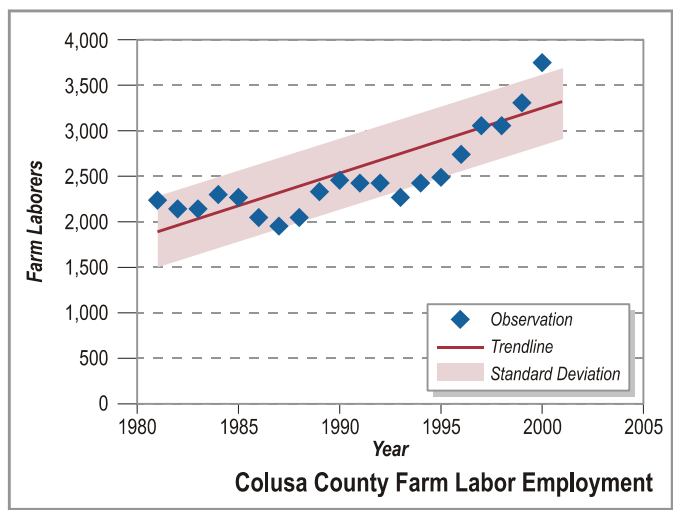
EWA acquisition of water through crop idling in Butte County would decrease farmworker employment. Idling 19,000 acres would displace 51 full-time laborer equivalents.

Analysis of data reveals Butte County is experiencing an increase in farm labor employment with annual seasonal and economic variations (standard deviation of the trend) of 170 laborers (Figure 12-3). EWA crop idling in Butte County would, however, affect fewer laborers than historic fluctuations.



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Figure 12-3
Butte County Farm Labor Trends



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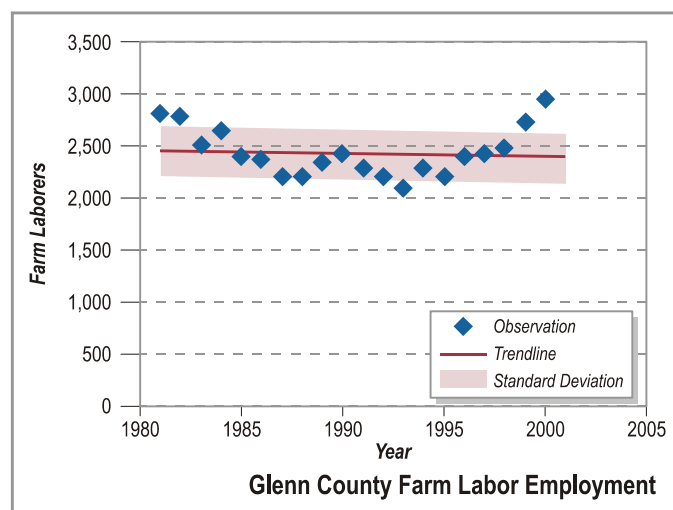
Figure 12-4
Colusa County Farm Labor Trends

12.2.3.1.2 Colusa County

EWA acquisition of water through crop idling in Colusa County would decrease farmworker employment. Idling 26,460 acres would displace 71 full-time laborer equivalents. Analysis of employment data reveals Colusa County is experiencing increasing levels of farm labor employment (Figure 12-4). Seasonal and economic changes in the Baseline Condition result in fluctuations (standard deviation on the trend) of 382 laborers. Crop idling in Colusa County would affect fewer laborers than historic fluctuations.

12.2.3.1.3 Glenn County

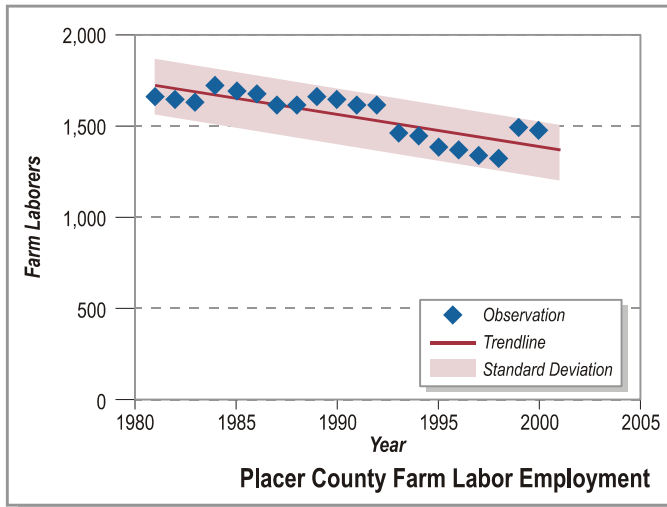
EWA acquisition of water through crop idling in Glenn County would decrease farmworker employment. Idling 16,750 acres would displace 45 full-time laborer equivalents (the equivalent of 45 full-time workers for 1 year). Analysis of employment data reveals no increasing or decreasing farm labor trends in Glenn County over the past 20 years, as shown



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Figure 12-5
Glenn County Farm Labor Trends

on Figure 12-5. Seasonal and economic changes in the Baseline Condition result in fluctuations (standard deviation of the average) of 237 laborers relative to the average number of employed farm laborers. Crop idling would affect farm laborers less than historic fluctuations.

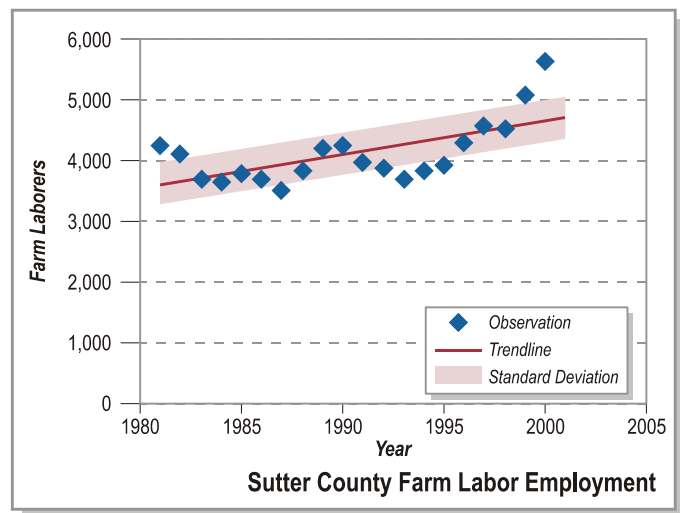


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Figure 12-6
Placer County Farm Labor Trends

12.2.3.1.5 Sutter County

EWA acquisition of water through crop idling in Sutter County would decrease farmworker employment. Idling 19,340 acres would displace 52 full-time laborer equivalents. Analysis of data reveals Sutter County is experiencing an increase in farm labor employment with annual seasonal and economic baseline variations (standard deviation of the trend) of 337 laborers (Figure 12-7). Crop idling in Sutter County would affect fewer laborers than historic fluctuations.

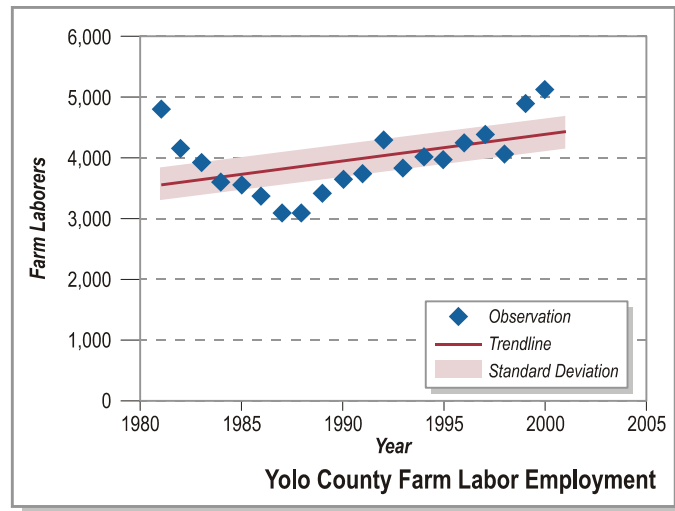


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Figure 12-7
Sutter County Farm Labor Trends

12.2.3.1.6 Yolo County

EWA acquisition of water through crop idling in Yolo County would decrease farmworker employment. Idling 4,770 acres would displace 13 full-time laborer equivalents. Analysis of data reveals Yolo County is experiencing increases in farm labor employment with annual seasonal and economic changes that result in variations of (standard deviations on the trend) 257 laborers (Figure 12-8). Crop idling in Yolo County would affect fewer laborers than historic fluctuations.



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Figure 12-8
Yolo County Farm Labor Trends

12.2.3.2 Export Service Area

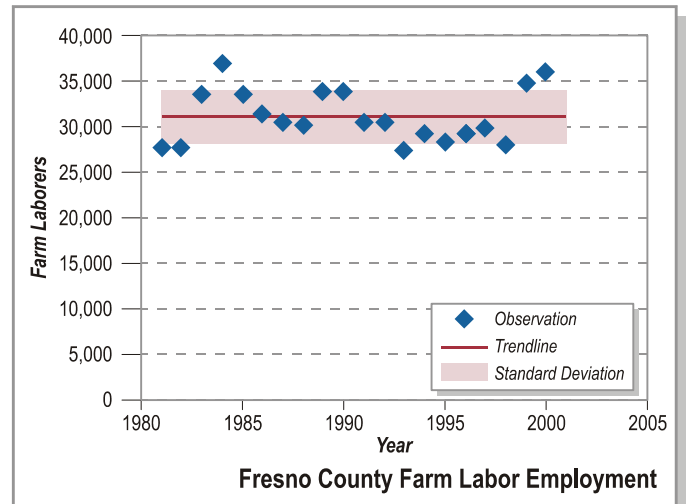
Crop idling in the Export Service Area would occur in Kings, Tulare, Kern, and western Fresno Counties. Table 12-5 provides the maximum number of acres of cotton that is proposed for idling in these counties under 1995 through 1999 economic conditions. Refer to Chapter 11, Regional and Agricultural Economics, for further discussion on the development of these acreages. Consistent with 1999 University of California Cooperative Extension Crop Budgets, a weighted average of 6.6 full time job equivalents is required for every 1000 acres of cotton.

Table 12-5 Maximum Proposed Acreages for Cotton Idling for Flexible Purchase Alternative			
	Total Acres of Cotton in County¹	Maximum Acreage Proposed for Idling in Dry Years	% of Total
Fresno	352,880	70,500	20.0%
Kern	246,616	49,300	20.0%
Kings	222,543	44,500	20.0%
Tulare	92,680	18,500	20.0%

¹ The figures representing total cotton acres within the counties are based on a five-year average to take into account any recent land trends in rice production. The data is taken from the County Agricultural Commissioners Reports from 1995 to 1999.

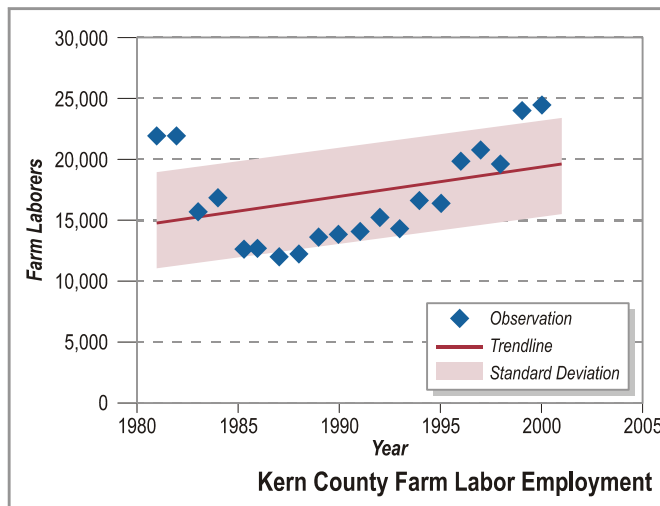
12.2.3.2.1 Fresno County

EWA acquisition of water through crop idling in Fresno County would decrease farmworker employment. Idling 70,500 acres would displace 465 full-time laborer equivalents. Analysis of farm labor data reveals Fresno's farm labor employment is neither increasing nor decreasing (Figure 12-9). Baseline farm employment fluctuates annually by (standard deviation of the average) 2,933 laborers. Crop idling in Fresno County would affect fewer laborers than historic fluctuations.



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Figure 12-9
Fresno County Farm Labor Trends



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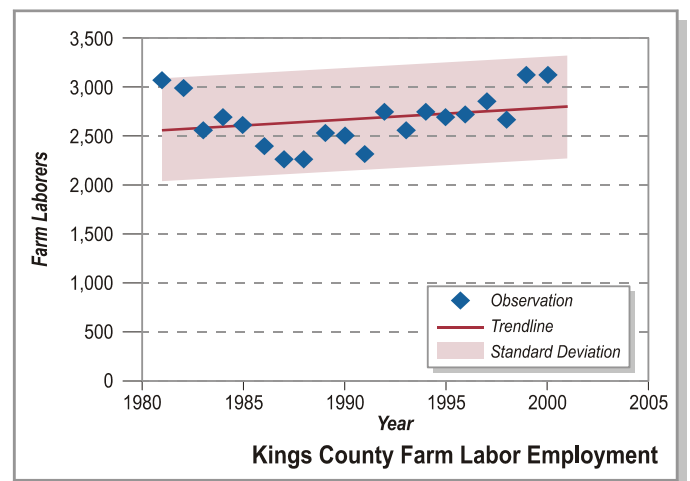
Figure 12-10
Kern County Farm Labor Employment

12.2.3.2.2 Kern County

EWA acquisition of water through crop idling in Kern County would decrease farmworker employment. Idling 49,300 acres would displace 325 full-time laborer equivalents. Analysis of farm labor data reveals increases in farm labor employment in Kern County (Figure 12-10). Baseline farm employment fluctuates annually by (standard deviation of the trend) 1,445 laborers. Crop idling in Kern County would affect fewer laborers than historic fluctuations.

12.2.3.2.3 Kings County

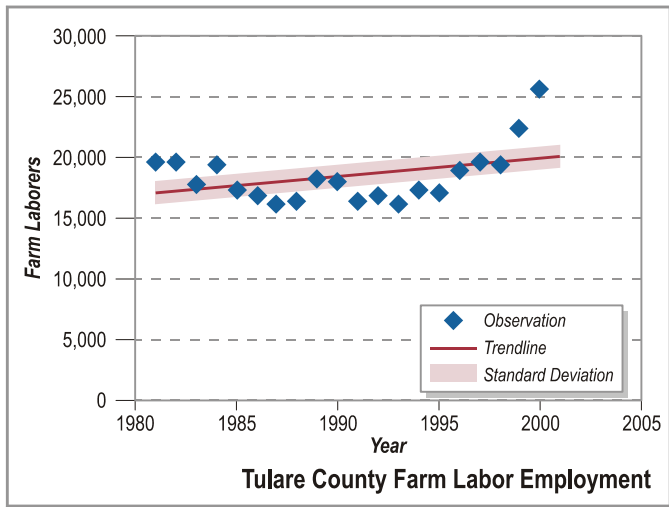
EWA acquisition of water through crop idling in Kings County would decrease farmworker employment. Idling 44,500 acres would displace 294 full-time laborer equivalents. Analysis of farm labor data reveals farm labor employment in Kings County is neither increasing nor decreasing (Figure 12-11). Baseline farm employment fluctuates annually by 530 laborers (standard deviation of the



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Figure 12-11
Kings County Farm Labor Trends

trend). Crop idling in Kings County would affect fewer laborers than historic fluctuations.



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Figure 12-12
Tulare County Farm Labor Trends

12.2.3.2.4 Tulare County

EWA acquisition of water through crop idling in Tulare County would decrease farmworker employment. Idling 18,500 acres would displace 122 full-time laborer equivalents. Analysis shows farm labor employment in Tulare County is increasing with seasonal variations of (standard deviation of trend) 922 laborers (Figure 12-12). Crop idling in Tulare County would affect fewer laborers than historic fluctuations.

EWA crop idling effects on farm labor do not exceed historic farm labor employment fluctuations in any county in the Upstream from the Delta Region or Export Service Area. Because crop idling does not exceed normal fluctuations induced by seasonal or

economic changes, current components of community stability would not be disrupted by crop idling.

12.2.4 Environmental Consequences/Environmental Impacts of Fixed Purchase Alternative

The Fixed Purchase Alternative specifies purchases of 35,000 acre-feet in the Upstream from the Delta Region, and 150,000 acre-feet in the Export Service Area. While the amounts in each region are fixed, the acquisition types and sources could vary. To allow the EWA Project Agencies maximum flexibility when negotiating purchases with willing sellers, this section analyzes the effect of maximum crop idling in all regions in the same year. In all instances, water transfer requirements for the Fixed Purchase Alternative impose correspondingly fewer effects on labor in Butte, Colusa, Glenn, Sutter, and Fresno Counties. In Placer, Yolo, Kern, Kings, and Tulare counties, the effects remain the same (Table 12-6).

EWA agencies would like the ability to extend annual crop idling contracts for the Fixed Purchase Alternative. Consistent with the project description, multi-year contracts would not result in idling more than 20 percent of available rice or cotton acreage in a county or region. These stipulations would maintain the current economic and social conditions.

Table 12-6 describes proposed acreages for rice and cotton idling under the Fixed Alternative; effects are all less than normal historic fluctuations. Future projects that

would occur during No Project conditions would add to loss of farm laborer jobs, particularly in Fresno and Kings counties. (See Chapter 22, Cumulative Effects.)

Table 12-6 Proposed Acreage for Rice Idling for Fixed Purchase Alternative					
Region	County	Total Acres of Rice/Cotton in County⁽¹⁾	Maximum Acreage Proposed for Idling in Dry Years	Percent of Total Rice/Cotton Acres to be Idled	Maximum Number of Jobs Lost
Upstream from the Delta Region	Butte	95,120	10,600	11.1%	29
	Colusa	132,338	15,000	11.3%	41
	Glenn	83,777	15,000	17.9%	41
	Placer	16,379	3,280	20.0%	9
	Sutter	96,722	10,600	10.9%	29
	Yolo	23,822	4,770	20.0%	13
Export Service Area	Fresno	352,880	65,000	18.4%	429
	Kern	246,616	49,300	20.0%	325
	Kings	222,543	44,500	20.0%	294
	Tulare	92,680	18,500	20.0%	122

⁽¹⁾ The figures representing total acres within the counties are based on a five-year average to take into account any recent land trends. The data is taken from the County Agricultural Commissioners Reports from 1995 to 1999.

12.2.5 Comparative Analysis of Alternatives

12.2.5.1 Upstream from the Delta

The Flexible Purchase Alternative analyzed the effects of the “worst-case scenario” produced by idling the maximum allowable crop acreage in a single year. This approach ensures consideration of the full scope of maximum effects, while it provides the EWA Project Agencies flexibility when annually choosing acquisition options. Because of the variety of acquisition options, EWA Project Agencies would not rely solely on crop idling for maximum water purchases. This section provides information about how EWA would more likely operate in different year types.

Under the No Action/No Project Alternative, farm labor is generally increasing in the Upstream from the Delta counties of Colusa, Yolo, Butte, and Sutter. Urbanization in Placer County is resulting in a declining trend in farm labor employment levels. These trends are expected to continue during wet and dry years under No Action/No Project conditions.

In the Upstream from the Delta Region, the Fixed Purchase Alternative would be limited to a maximum acquisition of 35,000 acre-feet from all sources of water. In most years, this amount could be obtained from stored reservoir water purchases. In those years when surface water assets were not available (in part or in total), the EWA agencies would acquire water first from groundwater substitution and/or groundwater purchase, followed by crop idling. Because of other readily available water acquisition options in the Upstream from the Delta Region, it is unlikely that crop idling would take place under the Fixed Purchase Alternative.

The Flexible Purchase Alternative could involve the purchase of up to 600,000 acre-feet of water from all sources upstream from the Delta during dry years. EWA

agencies would prefer to purchase water from upstream sources because the water is generally less expensive. The amount that could be purchased would be limited by the excess capacity of the Delta export pumps to move the water to export areas south of the Delta. During wet years, excess pump capacity may be limited to as little as 50,000 acre-feet of EWA asset water because the pumps primarily would be used to export State and Federal Project water to Export Service Area users. During dry years, when there would be less Project water available for pumping (and therefore the pumps would have greater availability capacity), the EWA Project Agencies could acquire up to 600,000 acre-feet of water from all sources upstream from the Delta that could result in maximum crop idling.

The potential for agricultural social effects during wet years for the Flexible Purchase Alternative would be very similar to the Fixed Purchase Alternative. That is, during wet years, acquisitions would most likely be from stored water sources, and crop idling would not be exercised. However, as rainfall amounts for areas north of the Delta decrease, reflecting dry year conditions, the greater Delta export capacity could result in a heavier reliance on crop idling for EWA acquisitions. If the EWA Project Agencies were to acquire 600,000 acre-feet in the Upstream from the Delta Region, they would need to utilize the most available sources, which would include stored reservoir water, groundwater substitution, groundwater purchase, and crop idling. Crop idling in dry years would reflect the socioeconomic conditions described above produced by maximum crop idling.

12.2.5.2 Export Service Area

Under the No Action/No Project Alternative, farm labor is generally increasing in the Export Service Area counties of Fresno, Kern, and Tulare Counties, yet remains stable in Kings County. These trends are expected to continue during wet and dry years under No Action/No Project conditions.

EWA asset acquisitions in the Export Service Area under the Fixed Purchase Alternative would be limited to 150,000 acre-feet from stored groundwater and crop idling sources. The EWA agencies would purchase stored groundwater first, and then purchase water from crop idling if more is needed. Stored groundwater has finite availability, and 150,000 acre-feet would not likely be available in all years. In years with less stored groundwater availability, EWA agencies would turn to crop idling for the remaining water.

EWA asset acquisitions in the Export Service Area under the Flexible Purchase Alternative would be dependent on the water year type north of the Delta. Export pump capacity during wet years would limit the ability of the EWA Project Agencies to move assets through the Delta, increasing their reliance on purchases from Export Service Area sources. During wet years, acquisitions within the Export Service Area could involve up to 600,000 acre-feet of assets. Much of this water would be from crop idling; therefore, socioeconomic effects of the Flexible Purchase Alternative are likely to be greater than the Fixed Purchase Alternative.

Both the Fixed Purchase Alternative and Flexible Purchase Alternative would increase the water supply reliability from the Baseline Condition in the Export Service Area. Increased water supply reliability could result in a reduction of idled crops in dry years and increased crop idling during wet years (due to diminished Delta capacity). Extremes in farm labor employment levels could slightly diminish as a result of increasing the water supply reliability during dry years and increased crop idling during wet years.

Table 12-7 compares the percentages of the maximum number of jobs lost under the Fixed and Flexible Purchase Alternative crop idling scenarios. Job losses reflect maximum idling conditions in each county. The number of jobs affected under the Fixed Purchase Alternative is equal to or less than those produced by the Flexible Purchase Alternative. Table 12-8 compares the number of acres proposed for idling in each county and the number of jobs affected for each alternative.

EWA water acquisition effects on farm labor do not exceed historic farm labor employment fluctuations. Currently established unemployment programs within the State and county include, but are not limited to, MediCal, CalWORKS, food stamps, and regional occupational training programs that provide services for displaced workers. These established programs address individually displaced farmworkers' needs and serve to buffer most, but not all, of the direct effects of economic, seasonal, and hydrologic changes that contribute to changing employment levels. Services that cover medical insurance and living expenses are lacking.

Table 12-7 Maximum Number of Jobs Lost to Crop Idling Under Fixed Purchase and Flexible Purchase Alternative						
Region	County	Total Farm Employment⁽¹⁾	Maximum Number of Farmworker Jobs Lost by Fixed Purchase Alternative	Percent of Total Farm Employment Affected Under Fixed Purchase Alternative	Maximum Number of Farmworker Jobs Lost by Flexible Purchase Alternative	Percent of Total Farm Employment Affected Under Flexible Purchase Alternative
Upstream from the Delta Region	Butte	3,496	28	0.8%	51	1.5%
	Colusa	2,633	41	1.6%	71	2.7%
	Glenn	2,062	41	2.0%	45	2.2%
	Placer	1,032	9	0.9%	9	0.9%
	Sutter	3,937	29	0.7%	52	1.3%
	Yolo	3,576	13	0.4%	13	0.4%
	Total	16,736	161	1.0%	241	1.4%
Export Service Area	Fresno	25,161	429	1.7%	465	1.8%
	Kern	17,126	325	1.9%	325	1.9%
	Kings	4,361	294	6.7%	294	6.7%
	Tulare	17,982	122	0.7%	122	0.7%
	Total	64,630	1170	1.8%	1206	1.9%

⁽¹⁾ 1999 REIS county farm employment includes hired workers that include bookkeepers, secretaries, and mechanics. Philip Martin, Ph.D., UCD, nationally recognized local expert on farm labor issues, states as a general "rule of thumb" that 25-40 percent of people reported by agricultural employers do not work directly on the farm. Therefore, the farmworker column represents 70 percent of REIS farm employment.

Table 12-8 Comparison of Maximum Effects for Flexible and Fixed Purchase Alternatives on Agricultural Social Issues						
Region		Asset Acquisition or Management	Result	Impacts	Flexible Alternative Change	Fixed Alternative Change
Upstream from the Delta Region	Butte	Crop Idling	Temporary conversion of rice crops to bare fields	Reduce rice crop acreage in Butte County	Idle 19,000 acres of rice resulting in 51 lost farm laborer jobs	Idle 10,600 acres resulting in 29 lost farm laborer jobs
	Colusa	Crop Idling	Temporary conversion of rice crops to bare fields	Reduce rice crop acreage in Colusa County	Idle 26,460 acres of rice resulting in 71 lost farm laborer jobs	Idle 15,000 acres of rice resulting in 41 lost farm laborer jobs
	Glenn	Crop Idling	Temporary conversion of rice crops to bare fields	Reduce rice crop acreage in Glenn County	Idle 16,750 acres of rice resulting in 45 lost farm laborer jobs	Idle 15,000 acres of rice resulting in 41 lost farm laborer jobs
	Placer	Crop Idling	Temporary conversion of rice crops to bare fields	Reduce rice crop acreage in Placer County	Idle 3,280 acres of rice resulting in 9 lost farm laborer jobs	Idle 3,280 acres of rice resulting in 9 lost farm laborer jobs
	Sutter	Crop Idling	Temporary conversion of rice crops to bare fields	Reduce rice crop acreage in Sutter County	Idle 19,340 acres of rice resulting in 52 lost farm laborer jobs	Idle 10,600 acres resulting in 29 lost farm laborer jobs
	Yolo	Crop Idling	Temporary conversion of rice crops to bare fields	Reduce rice crop acreage in Yolo County	Idle 4,770 acres of rice resulting in 13 lost farm laborer jobs	Idle 4,770 acres of rice resulting in 13 lost farm laborer jobs
Export Service Area	Fresno	Crop Idling	Temporary conversion of cotton crops to bare fields	Reduce cotton crop acreage in Fresno County	Idle 70,500 acres of cotton resulting in 465 lost farm laborer jobs	Idle 65,000 acres of cotton resulting in 429 lost farm laborer jobs
	Kern	Crop Idling	Temporary conversion of cotton crops to bare fields	Reduce cotton crop acreage in Kern County	Idle 49,300 acres of cotton resulting in 325 lost farm laborer jobs	Idle 49,300 acres of cotton resulting in 325 lost farm laborers
	Kings	Crop Idling	Temporary conversion of cotton crops to bare fields	Reduce cotton crop acreage in Kings County	Idle 44,500 acres of cotton resulting in 294 lost farm laborer jobs	Idle 44,500 acres of cotton resulting in 294 lost farm laborer jobs
	Tulare	Crop Idling	Temporary conversion of cotton crops to bare fields	Reduce cotton crop acreage in Tulare Countv	Idle 18,500 acres of cotton resulting in 122 lost farm laborer jobs	Idle 18,500 acres of cotton resulting in 122 lost farm laborer jobs

12.2.6 Cumulative Effects

Water acquisition programs considered for cumulative analysis include: 1) Sacramento Valley Water Management Agreement, 2) Dry Year Purchase Program, 3) Drought Risk Reduction Investment Program (DRRIP), 4) Central Valley Project Improvement Act (CVPIA) Water Acquisition Program (WAP), 5) Environmental Water Program, and the 6) CALFED Ecosystem Restoration Program (ERP). Chapter 22 presents details on each of these programs. Potential effects of these programs are described below. Of additional consideration are future crop idling programs such as the Westland Global Land Settlement Program and programs that arise in response to a reduction of Colorado River water.

Of the above mentioned water acquisition programs, those that can be eliminated from further analysis are those that do not use crop idling and those that will combine into a single program. At this time the Sacramento Valley Water Management Agreement does not include water acquisition via crop idling and are subsequently eliminated from further agricultural social issue analysis. In October 2004, with completion of a programmatic document, the Dry Year Purchase Program will be combined into the DRRIP (Jones 2002). Though the full scope is yet undetermined, it is possible that water acquisition via crop idling in the Export Service Area is entirely possible (Jones 2002). The Dry Year Purchase Program and DRRIP will be analyzed as one crop-idling acquisition program.

Cumulative effects would apply to those water acquisition programs purchasing water via crop idling in the Upstream from the Delta Region during dry years and in the Export Service Area. Crop idling would most likely occur in the Upstream from the Delta Region during dry years because capacity through the Delta increases. The programs that would exercise similar options are the CVPIA WAP, the EWP, the ERP, and DRRIP. CVPIA (WAP) purchases water from willing sellers given sufficient quantities are available (Jewel 2002). Water transfers through the Delta for the CVPIA (WAP) and DRRIP generally take priority over EWA, which reduce the potential for EWA crop idling. CALFED agencies developed the EWP to carry out flow-related goals of the ERP. The EWP on behalf of the ERP could purchase agricultural land in the Upstream from the Delta Region for habitat restoration and reduce the demand for farm labor.

Careful attention should be given to future projects underway in Kings and Fresno Counties. Although details are still under negotiation and the final outcome is unclear, Westland Water District is planning to permanently idle up to 200,000 acres of drainage-impaired land. Once details of Westland's proposed Global Land Settlement Program become available, it is assumed that there will be a transition period requiring coordination between water acquisition programs and farm labor before crop idling can occur. EWA agencies would maintain close contact with these counties to identify potential effects.

EWA agencies would avoid cumulative effects to farmworkers subsequent to these programs by conducting annual investigations of crop idling conditions in each county and water district before initiating further crop idling discussion. During such investigations the EWA agencies would consider other reasonably, foreseeable transfers by all water transfer programs when determining where to acquire water through crop idling. EWA agencies would then only purchase water from idling 20 percent of the rice land in a county, where this 20 percent would include the other, reasonably foreseeable transfers. Information regarding the amount of idled crop acreage should come from DWR Land Use Surveys, the USDA, and county crop reports. Local Farm Bureaus, UCCE offices, Agricultural Commissioners Offices, or other crop specific authorities could verify the information. With careful coordination, data collection, and verification efforts, crop idling for the EWA would not cumulatively contribute adverse conditions on farm labor.

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